



Dr. T. KAVITHA
Assistant Professor

Contact

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Academic Qualifications: M.Sc., M.Phil., Ph.D.

Teaching Experience: 16 Years

Research Experience: 8 Years

Additional Responsibilities

1. Coordinator- Women's club Department of Microbiology, Alagappa University, Karaikudi.
2. Deputy Coordinator for Journal club- Department of Microbiology, Alagappa University, Karaikudi.

3. Coordinator - Department IQAC Committee - Department of Microbiology, Alagappa University, Karaikudi.
4. Deputy Coordinator for Academic audit - Department of Microbiology, Alagappa University, Karaikudi.
5. Coordinator - Department student affairs and counseling - Department of Microbiology, Alagappa University, Karaikudi.
6. Associate Editor in - ALU-Micro Fanzine, Departmental Magazine, Department of Microbiology, Alagappa University, Karaikudi.
7. Coordinator- Village placement programme- Department of Microbiology, Alagappa University, Karaikudi.
8. Member - Department Research Committee - Department of Microbiology, Alagappa University, Karaikudi.
9. Member - Department Purchase Committee - Department of Microbiology, Alagappa University, Karaikudi.
10. Supervisor of Swachh Bharat Summer Internship Programme for the academic year 2018-2019- Department of Microbiology, Alagappa University, Karaikudi.
11. Coordinator for Swayam and MOOCs courses - Department of Microbiology, Alagappa University, Karaikudi.
12. Internal question paper setting in charge - Department of Microbiology, Alagappa University, Karaikudi.
13. Department NIRF in charge -- Department of Microbiology, Alagappa University, Karaikudi.

Areas of Research

1. **Agricultural and Environmental Microbiology**
2. **Biocontrol of plant microbial diseases**
3. **Biodegradation**
4. **Antimicrobial metabolites**
5. **Enzyme Biotechnology**

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	-	3
	M.Phil.	9	-
Project	PG	52	-
	UG / Others	-	-

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
17	30	3	12	2 (Book chapter)

Cumulative Impact Factor (as per JCR) :	37.5
h-index :	8
i10 index :	7
Total Citations :	134

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	AURF – Alagappa University Karaikudi	7.3.2017	7.3.2019	Screening for antagonistic substances against Tikka Disease of <i>Arachis hypogaea</i> L.	1.0
2	DST/SERB-ECRA	28.9.2017	28.9.2020	Evaluation of Tomato Associated Rhizobacteria for Biocontrol of Wilt Pathogen <i>Fusarium oxysporum</i>	14.29

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
-	-	-	-	-	-

Consultancy Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	-	-	-	-	-

Distinctive Achievements / Awards

1. Early Career Research Award-2017 from DST-SERB, Govt. of India

Countries Visited

Visited Malaysia to present a research paper in the International Conference on Recent Trends in Agriculture, Environmental Sustainability and Climate Change-2019 hosted at University of Malaya, Kuala Lumpur.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 9

1. International conferences as Organizing secretary- 2
2. National workshop and conferences - 7

Events Participated (optional)

Conferences / Seminars / Workshops: 47

1. Workshop - 11
2. National Conferences- 12
3. International Conferences-25

Training Programs

1. Participated in the Faculty development program on Accreditation Preparedness Engagement held during 18th -23th September, 2016 in Alagappa University, Karaikudi.
2. Participated in the Faculty development (Enrichment) program on Accreditation Quality Enhancement held during 6th -12th January, 2017 in Alagappa University, Karaikudi.
3. Participated in One - Week Short Term Training Programme on Research Publication and Anti- plagiarism, organized by Department of English and Foreign Languages and Centre for Technical and Academic Writing, Alagappa University, Karaikudi.
4. Participated in the 100th orientation Programme from 15.11.2017 to 12.12.2017 conducted at UGC-Human Resource Development centre, Bharathidasan University, Tiruchirappalli.

5. Participated in the UGC-Sponsored Refresher Course in Life Sciences (Interdisciplinary) from 16.07.2019 to 29.07.2019 conducted by UGC-Human Resource Development centre, Bharathidasan University, Tiruchirappalli.

Memberships

Professional Bodies

1. Life Member: Association of Microbiologists of India (NO: 4760/2018)
2. Life Member: The Indian Science Congress Association (NO: L36858)

Academic Bodies (such as Board of Studies etc.,)

1. Member of Board of Studies in B.Sc., Microbiology for the affiliated colleges of Alagappa University
2. Member of Board of Studies in B.Sc., Microbiology and Clinical Lab Technology for the affiliated colleges of Alagappa University
3. Member of Board of Studies in M.Sc., Microbiology for the affiliated colleges of Alagappa University, Karaikudi.
4. Member of Board of Studies for the Microbiology (UG and PG), Bharathidasan University, Tiruchirappalli-620024.
5. Member of Board of Studies –Department of Microbiology, Alagappa University, Karaikudi

Others

1. Member - M.Sc. Microbiology question paper setting, Bharathidasan University, Trichy.
2. Member - B.Sc. Microbiology question paper setting, Periyar University, Salem.
3. Member in Evaluation board, Alagappa University, Karaikudi.
4. Reviewer:
Journal of Biological Science, Alagappa University, Karaikudi.
Journal of Biocatalysis and Agricultural Biotechnology-Elsevier Publications.

Resource persons in various capacities

Number of Invited / Special Lectures delivered:

1. Remedial coaching given to the student of Bioinformatics, Department of Bioinformatics, Alagappa University, Karaikudi.
2. Served as resource person and delivered special lecture on Translational Health Research in Plant Systems in Zoology Association Meeting organized by Department of Botany, Government Arts College for Women [Autonomous] at Pudukkottai on 27.01.2020.
3. Acted as resource person and delivered special lecture on “Recent research in microbial metabolism” organized by Department of Biotechnology, Dr. Umayal Ramanathan College for Women at Karaikudi on 31. 01.2019.

4. Acted as resource person and delivered special lecture on “Microbial Diseases” in Zoology Association Meeting organized by Department of Zoology, Government Arts College for Women [Autonomous] at Pudukkottai on 20.02.2018.
5. Acted as resource person and delivered special lecture on “Role of microbes in sustainable agriculture and environmental health” organized by Department of Microbiology, Arputha College of Arts & Science, Pudukkottai on 11.02.2019.
6. Acted as resource person and delivered special lecture on “Regulation of gene expressions in latest research” organized by Department of Microbiology, Sri Bharathi Arts & science college for women, Pudukkottai on 5.10.2018.
7. Acted as resource person and delivered special lecture on “Polarography, radioactivity, FTIR and Evolutionary theory” organized by Department of Microbiology, Sri Bharathi Arts & science college for women, Pudukkottai on 16.08.2018.
8. Acted as resource person and delivered special lecture on “Isolation and identification of pathogens, Endosperms culture and production of triploids” organized by Department of Microbiology, Sri Bharathi Arts & Science college for women, Pudukkottai on 14.09.2018.

Others

1. Sequences submitted in GenBank: 26

Name of the organism submitted	Genbank Accession No.	Ribotyping Method
<i>Galactomyces candidum</i> PAJPh5	MH000322	18S/ITS
<i>Saccharomyces crataegensis</i> LMJPh2	MH000321	18S/ITS
<i>Pichia kluyveri</i> ORPPh4	MH000320	18S/ITS
<i>Meyerozyma caribbica</i> ORJPh4	MH000319	18S/ITS
<i>Rhodotorula mucilaginosa</i> GPJPh3	MH000318	18S/ITS
<i>Streptomyces clavuligerus</i> KAVIJAY1492R	MH161376	16S
<i>Bacillus cereus</i> strain NK2	KR909310	16S
<i>Bacillus amyloliquefaciens</i> strain CCSP1	KP001322	16S
<i>Staphylococcus hominis</i> strain KE4	MN453394	16S
<i>Staphylococcus hominis</i> subsp. <i>novobiosepticus</i> strain KE6	MK910112	16S
<i>Bacillus subtilis</i> strain PP16	MK874592	16S

<i>Kutzneria</i> sp. strain TSII	MN565961	16S
<i>Kutzneria</i> sp. strain A14	MN658331	16S
<i>Achromobacter mucicolens</i> strain PP8	MK874621	16S
<i>Achromobacter kerstersii</i> strain JKP9	MN857688	16S
<i>Achromobacter insuavis</i> strain JKP12	MN857683	16S
<i>Pseudomonas xanthomarina</i> strain PKMB18	MN857751	16S
<i>Staphylococcus hominis</i> strain KE4	MN453394	16S
<i>Pseudomonas stutzeri</i> strain KRP6	MN857682	16S
<i>Pseudomonas stutzeri</i> strain KRP8	MN857681	16S
<i>Bacillus haynesii</i> strain TRS11	MN857687	16S
<i>Pseudomonas songnenensis</i> strain TH12	MN857752	16S
<i>Bacillus clausii</i> strain E1	MN658363	16S
<i>Meyerozyma caribbica</i> (<i>Candida fermentati</i>)	MH286916	NAD(P) binding domain of enzyme Xylose Reductase gene
<i>Fusarium equiseti</i> strain MFol	MW785181	18S/ITS
<i>Sarocladium</i> sp. strain SWL	MZ151351	18S/ITS

Recent Publications

International Journals

1. K. Vijay ., N. Suganthy ., G. Muralitharan ., Munirah Fahad Aldayel., Noorah Alsowayeh., T. **Kavitha** ., Development of siderophore-based rhizobacterial consortium for the mitigation of biotic and abiotic environmental stresses in tomatoes: An in vitro and in planta approach (2022), Journal of Applied Microbiology, 00, 1–12. <https://doi.org/10.1111/jam.15625> (Impact Factor: **4.05**)
2. K. Vijay., Saqib Hassan., M. Govarathanan., **T. Kavitha.**, Biosurfactant lipopeptides and polyketide biosynthetic gene in rhizobacterium *Achromobacter kerstersii* to induce systemic resistance in tomatoes (2022), Rhizosphere 23, 100558. <https://doi.org/10.1016/j.rhisph.2022.100558> (Impact Factor: **3.4**)

3. S. Dheepthi GunaVathana., M. Shibasini ., S.Girija., J.Wilson., **T. Kavitha.**, A.Cyrac Peter, Palladium nanospheres incorporated polythiophene nanocomposite: Investigation of potency promising antimicrobial efficacy (2022), [*Inorganic Chemistry Communications*](#) **Volume 144**,109867. <https://doi.org/10.1016/j.inoche.2022.109867> (Impact Factor: **3.428**)
4. N. Prakashkumar, R. Mohamed Asik, **T. Kavitha**, G. Archunan, N. Suganthy. Unveiling the anticancer and anti biofilm potential of catechin overlaid reduced Graphene oxide /zinc. *Journal of cluster Science*. 2021, № 6, p. 2813-2830. <https://doi.org/10.1007/s10876-021-02194-2>. (Impact Factor: **3.44**).
5. Arumugam, N., Boobalan, T., Pugazhendhi, A., Arun, A., Jothi Basu, M., Suganya Devi, T., and **Kavitha, T.**, Particle size influence on the composition of sugars in corncob hemicellulose hydrolysate for xylose fermentation by *Meyerozyma caribbica*, *BioresourceTechnology*(2021),doi:<https://doi.org/10.1016/j.biortech.2021.125677>(Impact Factor: **11.88**)
6. Devi, T. S., Vijay, K., Vidhyavathi, R. M., Kumar, P., Govarthanan, M., & **Kavitha, T.** (2021). Antifungal activity and molecular docking of phenol, 2, 4-bis (1, 1-dimethylethyl) produced by plant growth-promoting actinobacterium *Kutzneria* sp. strain TSII from mangrove sediments. *Arch Microbiol*, 1-14. <https://doi.org/10.1007/s00203-021-02397-1> (Indexing: Scopus; WoS; Impact Factor: **2.66**; Springer-Verlag, Germany; NAAS score: 7.64)
7. Vijay, K., Kiran, G. S., Divya, S., **Thangavel, K.**, Thangavelu, S., Dhandapani, R., & **Selvin, J.** (2021). Fatty Acid Methyl Esters From the Coral-Associated Bacterium *Pseudomonas aeruginosa* Inhibit Virulence and Biofilm Phenotypes in Multidrug Resistant *Staphylococcus aureus*: An in vitro Approach. *Front Microbiol*, 12, 394. <https://doi.org/10.3389/fmicb.2021.631853> (Indexing: Scopus; WoS; Open Access; Impact Factor:**6.06**; Frontiers, USA; NAAS Score: 10.26)
8. Karuppiah Vijay, Thangarasu Suganya Devi, Karthikeyan Kirupa Sree, Abdallah M. Elgorban, Ponnuchamy Kumar, Muthusamy Govarthanan and **Thangavel Kavitha** (2020). In vitro screening and in silico prediction of antifungal metabolites from rhizobacterium *Achromobacter kerstersii* JKP9. *Arch Microbiol.*, 202: 2855-2864. (Springer-Verlag; IF: **2.66**; NAAS score: 7.64) <https://doi.org/10.1007/s00203-020-01982-0>
9. Karuppiah Vijay, Karthikeyan Kirupa Sree, Thangarasu Suganya Devi, Soundarya Soundarapandian, Vidhyavathi Ramasamy and **Kavitha Thangavel** (2020). Computational Biology Approaches Revealing Novel target in Vascular Wilt Pathogen *Fusarium oxysporum* f. sp. *lycopersici* for the Ligands of Marine Actinobacterial Origin. *J. Pure Appl. Microbiol.*, 14(1):363-373
10. Arumugam Nagarajan, Boobalan Thulasinathan, Saravanan Soorangkattan, Jothi Basu Muthuramalingam, Arun Alagarsamy, SuganyaDevi Thangarasu and **Kavitha Thangavel** (2020) *In silico* and *in vitro* comparison of nicotinamide adenine

dinucleotide phosphate dependent xylose reductase rossmaan fold in Debaryomycetaceae yeast family. *Biocatal. Agric. Biotechnol.*, 24: 101508.

11. Arumugam N, Thulasinathan B, Pasubathi R, **Kavitha. T**, Muthuramalingam JB, Arunachalam A. (2017) Biogenesis of silver nanoparticles using selected plant leaf extract; characterization and comparative analysis of their antimicrobial activity. *Nanomed J.* 4(4): 208-217.
12. Nagarajan, A., Soorangkattan, S., **Kavitha. T.**, Thulasinathan, B., Muthuramalingam, J.B. and Alagarsamy, A. (2017) Campus-Wide Floristic Diversity of Medicinal Plants in Indian Institute of Technology-Madras (IIT-M), Chennai. *Am. J. Plant Sci.*, 8, 2995-3012.
13. **Kavitha, T.** and N. Shanmugapriya, (2016), "Screening of Rhizobacteria for PGPR and Antagonistic activities isolated from medicinal plants", *Int. J. Curr. Res.*, Vol. 8, Issue, 09, pp.38841-38846.
14. **Kavitha, T.**, A. Alagusaranya and R.Nelson, (2016), "Antimicrobial Activity of Chloroform Extract of *Aristolochia bracteata* Retz. and analysis of bioactive compounds. *Int. J. Curr. Microbiol. Appl. Sci.*, Vol 5 Issue 3, pp. 559-565.
15. **Kavitha, T.** and R. Nelson, (2014). Effect of Arbuscular Mycorrhizal (AM) fungi on growth and yield of sunflower (*Helianthus annuus* L.). *J. Exp. Bio. Agric. Sci.*, 2(2s): 226-232.
16. **Kavitha, T.**, R. Nelson and S. Josephin Jesi, (2013). Screening of rhizobacteria for plant growth promoting traits and antifungal activity against charcoal rot pathogen *Macrophomina phaseolina*. *Int. J. Pharm. Bio. Sci.*, 4(4): 177-186.
17. **Kavitha, T.** and R. Nelson, (2013). Diversity of Arbuscular Mycorrhizal Fungi (AMF) in the Rhizosphere of *Helianthus annuus* L. *American- Eurasian J. Agri and Environ. Sci.*, 13(7): 982-987.
18. **Kavitha T.** and R. Nelson, (2013). Exploiting the biocontrol activity of *Trichoderma* spp against root rot causing phytopathogens. *ARPN. J. Agri and Bio.Sci.*, 8(7): 571-574.
19. **Kavitha T.**, R. Nelson, R. Thenmozhi, E. Priya, (2012). Antimicrobial activity and phytochemical analysis of *Anisomeles malabarica* (L) R.BR. *J. Micobiol. Biotech. Res.*, 2(1):1-5.
20. Priya, E., Thenmozhi, R., **Kavitha, T.**, Nagasathya, A., 2011. Efficacy of phosphate solubilizing Activity of the Marine Fungi *Aspergillus awamori*. *Indian J. App. Microbiol.*
21. Thenmozhi R., T. Reshma, **T. Kavitha**, K. Madhusudhanan, D. Praveen Kumar, (2011). Studies on VAM colonization on selected medicinal plants. *Arch. App. Sci. Res.*, 3(5): 445-449.

National Journals

1. **Kavitha T.** and R. Nelson and Ramesh Babu, (2012). Using jackfruit (*Artocarpus heterophyllus*) pulp as substrate for cellulase production by *Rhizopus stolonifer*. *Research. J. Science and Tech.*, 4(2): 67-69.
2. Kasthuri, P., Shanthi,V., **Kavitha, T.** and Senthil Kumar, R., 2011. Biodegradation of organophosphorus Pesticides by *Azospirillum* sp. *RJOBS* 3(2):36-40.
3. **Kavitha T.** and R. Nelson, (2011). Microbial synthesis of Metal Nanoparticles and their Applications (Review article). *RJOBS*. 3(1): 50-57.